

increasing cooling fill surface area by approximately 20% by constructing a new helper cooling tower for each unit. Total current circulation flow rates and cycles of concentration will not change. However, flow will be reduced to the present towers by 20%, and redirected to the new helper towers to allow for a larger differential temperature change. To accommodate this expansion, cooling tower transformers feeding the cooling tower fan motors and new towers will be upgraded as well.

- **Boiler Safety Valve Additions:**

Rather than add new safety valves, IPSC will replace one existing electro relief valve (ERV) with one main steam safety valve on each unit. This will address reliability concerns with the existing valves and accommodate the planned increase in generation capacity.

- **Generator Cooling Enhancement:**

IPSC intends to upgrade the current generator and stator cooling systems.

- **Isophase Bus Cooling Enhancement:**

The 26kv generator electrical bus feeding the main step-up transformer will be upgraded to enhance the current isophase bus duct cooling systems.

- **Large Motor Bus Loading Equalization:**

IPSC plans to equalize the loading between the large and small motor bus. Due to limited tap adjustment capability on the auxiliary transformers feeding these load centers, several motors will be moved from one supply to the other in order to maintain required motor terminal voltages as unit output is increased.

- **Boiler Feed Pump Performance Upgrade:**

The boiler feed pump will be enhanced with improved bearing housings, flow path smoothing, and impeller clearance modifications to provide increased pump output and reliability.

- **Main Step-up Transformer Cooling:**

The step-up transformers will be modified to increase the transformer cooling system capacity for better temperature control of the transformer oil, core, and housing.

- **High Pressure Heater Drain Line Modifications:**

High pressure heater drain lines will be modified to eliminate resonant vibration at increased load.